AMENDMENT

Kindly amend the present invention, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows.

IN THE CLAIMS:

Kindly amend the claims, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, to read as follows:

Please cancel claims 1-27 without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

1-27. (Canceled)

Please add the following new claims:

28. (New) A nonpathogenic gene delivery vector of an anaerobic bacterium, wherein the bacterium grows under anaerobic conditions and is transformed with a cloning vector, wherein said cloning vector:

(1) produces a recombinant vector in vitro with a DNA encoding a protein (a) with anti-tumor activity, or a protein (b) that converts a precursor of an antitumor substance (P) into an antitumor substance,

(2) autonomously replicates in a bacterium belonging to the genus Bifidobacterium,

(3) transforms a bacterium belonging to the genus Bifidobacterium, and

(4) has a selective marker that can detect specifically a bacterium belonging to the genus Bifidobacterium transformed with the cloning vector.

29. (New) The gene delivery vector according to claim 28, having at least one selectable marker, wherein the selectable marker comprises ampicillin resistance, tetracycline resistance, neomycin resistance, kanamycin resistance, nutrition requirements, or medium selection.

30. (New) The gene delivery vector according to claim 28, wherein the cloning vector is an E.coli-Bifidobacterium shuttle vector.

31. (New) The gene delivery vector according to claim 30, wherein the cloning vector has a promoter and terminator involved in expressing a gene encoding a histon-like DNA binding protein of a bacterium of the genus Bifidobacterium, and wherein a DNA encoding the protein

(a) with anti-tumor activity, or the protein (b) that converts a precursor of an antitumor substance (P) is integrated downstream of the promoter.

32. (New) The gene delivery vector according to claim 31, wherein the promoter and terminator is a Bifidobacterium Longum promoter and a Bifidobacterium Longum terminator.

33. (New) The gene delivery vector according to claim 32, wherein the promoter and terminator is a DNA located at nucleotides 1 to 192 of SEQ ID No: 1, and a DNA at nucleotides 472 to 600 of SEQ ID No: 1, respectively.

34. (New) The gene delivery vector according to claim 33, wherein the cloning vector is pBLES100

35. (New) The gene delivery vector according to claim 28, wherein the bacterium belonging to the genus Bifidobacterium is Bifidobacterium adolescentis, Bifidobacterium longum, Bifidobacterium bifidum, Bifidobacterium pseudolongum, Bifidobacterium thermophilium, Bifidobacterium breve, or Bifidobacterium infantis.

36. (New) The gene delivery vector according to claim 35, wherein the bacterium belonging to the genus Bifidobacerium is Bifidobacterium longum.

37. (New) The gene delivery vector according to claim 28, wherein the gene delivery produces the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance

38. (New) The gene delivery vector according to claim 37, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance comprises cytosine deaminase, nitroreductase, herpes simplex virus type 1 1, thymidine kinase or b-glucuronidase.

39. (New) The gene delivery vector according to claim 38, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is cytosine deaminase.

40. (New) The gene delivery vector according to claim 28, wherein the gene delivery vector is Bifidobacterium longum 105A/pBLES100-S-eCD, represented by the accession number FERM BP-7274.

41. (New) A pharmaceutical composition for treating a solid tumor, comprising the gene delivery vector according to claim 28.

42. (New) A kit of a pharmaceutical preparation for treating a solid tumor comprising (A) a pharmaceutical composition for treating a solid tumor comprising the gene delivery vector according to claim 37, and (B) a pharmaceutical composition comprising a precursor of an antitumor substance (P) which is converted into an antitumor substance by the protein (b) that is produced from composition (A), wherein the compositions (A) and (B) can be admixed or administered together as one composition, administered separately at the same, or administered separately at different times.

43. (New) The kit of a pharmaceutical composition for treating a solid tumor according to claim 42, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is cytosine deaminase, and the precursor of an antitumor substance (P) is 5-fluorocytocine.

44. (New) A method for treating a solid tumor, comprising administering an effective amount of the pharmaceutical composition according to claim 41, optionally, with an effective amount of a precursor of an antitumor substance (P).

45. (New) A method for treating a solid tumor, comprising administering an effective amount of the kit of claim 42 by administering effective amounts of the pharmaceutical composition (A) and (B) thereof.

46. (New) The method of claim 45 wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is cytosine deaminase, and the precursor of an antitumor substance (P) is 5-fluorocytocine.